

## **ABSTRACT**

A corona charge spray gun for dispensing powders for powder coatings. The spray gun includes a housing defining a chamber terminating in an outlet passageway. A high voltage electrode is mounted in the chamber spaced upstream of the outlet passageway and a ground electrode is mounted in the chamber spaced upstream from the high voltage electrode. The ground electrode is selected to have a surface area sufficiently larger than the surface area of the high voltage electrode in order to allow high voltages to be applied to the high voltage electrode without arch discharging occurring in the chamber. An inlet opens into the chamber for conducting a powder-gas mixture into the chamber and the electrodes receive cleaning gases for avoiding powder deposits on the electrodes.